

Abstract

Background: To prolong the effect of spinal anaesthesia into the postoperative period many pharmacological agents are being used intrathecally and intravenously. The present study was designed to evaluate the effects of single bolus dose of intravenous Dexmedetomidine on spinal anaesthesia and analgesia in patients undergoing below umbilical surgeries under spinal anaesthesia with 0.5% Hyperbaric Bupivacaine.

Methods: Sixty patients posted for below umbilical surgeries under spinal anaesthesia were randomly allocated to two groups. Group D (study group) patients received single bolus dose of 0.5mcg/kg of intravenous Dexmedetomidine and Group C (control group) received 100 ml of normal saline. Variation in the onset of sensory and motor block, two segment regression time, duration of motor block, duration of analgesia, effect on sedation and side effects were recorded.

Results: The onset of sensory and motor block was significantly earlier in Group D (2.20 ± 0.80 minutes, 2.17 ± 0.53 minutes) as compared to Group C (4.33 ± 0.84 minutes, 3.87 ± 0.62 minutes). The two segment regression was significantly prolonged in Group D (104 ± 20.6 minutes) as compared to Group C (75 ± 22.5 minutes). The duration of analgesia in Group D (223.83 ± 12.64 minutes) was significantly prolonged when compared to Group C (180.83 ± 17.27 minutes). Sedation score and incidence of bradycardia was high in Group D when compared to Group C.

Conclusion: Single bolus dose of IV Dexmedetomidine prior to spinal anaesthesia prolongs the duration of sensory block and duration of analgesia with satisfactory arousable sedation and acceptable side effects.

Key words: Bupivacaine; Dexmedetomidine; Spinal anaesthesia